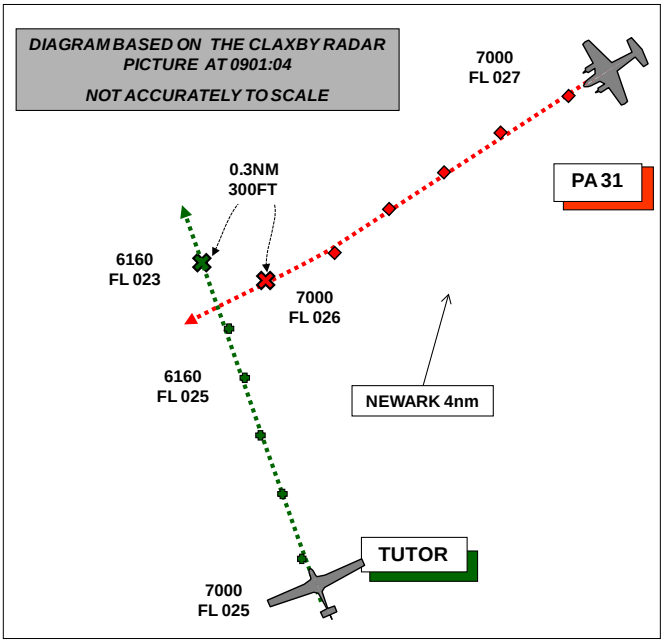
AIRPROX REPORT No 2011142

Date/Time:	18 Oct 2011 0901Z	
Position:	5301N 00049W (4nm SSW Newark)	
Airspace:	Lincs AIAA	(*Class: G*)
	Reporting Ac	*Reported Ac*
Type:	Tutor	PA31
Operator:	HQ Air (Trg)	Civ Pte
Alt/FL:	2000ft RPS (996mb)	2500ft NK
Weather:	VMC NR	VMC CAVOK
Visibility:	30km	>10km
Reported Separation:	NR V/0 H	>500ft V/0.5nm H
Recorded Separation:	300ft V/ 0.3nm H	



PART A: SUMMARY OF INFORMATION REPORTED TO UKAB

THE TUTOR PILOT reports flying an instructional sortie in a white ac with external lights switched on, squawking with Modes C and S and with TAS fitted. They were heading 314° in good VMC about 4nm SSW of Newark and the student pilot had just obtained a BS from Doncaster Radar who gave them a squawk [6160 see diagram] but the controller had not identified them when they received a TAS alert and "Traffic Traffic" sounded. The display showed a contact 100ft above and to the right in the 2 o-clock position at a distance of about 1nm. In this instance the TAS alert was timely and the contact was seen slightly above and behind the right wing. He [the instructor] took control and took evasive action by descending their ac about 300ft. The other ac was seen to be a dark coloured (possibly blue) low-wing, low-tail twin-engine ac which was flying straight and level and appeared to take no evasive action indicating, he thought, that its pilot had not seen them. It appeared to be heading towards Nottingham/East Midlands and, although of a similar size to the RAF Cranwell based King Airs, it appeared to have a low set tail plane.

If they had not taken the avoiding action the ac would have passed about 100ft directly overhead. He assessed the risk as being medium and reported the incident immediately to Doncaster Radar.

He thought that the ac had initially been obscured by the Tutor canopy arch which delayed visual acquisition.

THE PA31 PILOT reports flying a private flight under VFR from Wickenby to East Midlands in a grey and white ac with strobes switched on. He was squawking as directed with Modes C and S while in receipt of a BS from Waddington APP. While in the cruise about 10nm W of Waddington, heading 280° at 150kt and 2500ft, they informed him of an ac 6nm away tracking from L to R below him at 2000ft. The visibility was good and he saw a low-wing single-engine white ac with RAF roundels; when it was about ½nm away in his 11 o'clock and well below it performed a rapid dive.

He did not consider the incident to be an Airprox so he carried on to his destination, transferring to their frequency, also on a BS. He did not hear the other ac on either frequency at any time and considered there to be no risk.

BM SAFETY MANAGEMENT reports this Airprox occurred between a Tutor operating VFR in VMC in receipt of a BS from Doncaster APP and a PA31 operating VFR in VMC. Although the PA31 pilot stated that he was in receipt of an ATS from Waddington [ZONE] at the time of the Airprox, subsequent investigation showed that this was not the case; he had been in receipt of a BS from Waddington ZONE but left the frequency at 0859:59 with the intention of free-calling East Midlands. Prior to leaving the freq however, ZONE provided the pilot with accurate TI on the Tutor stating, "*traffic south-west of you, four miles, tracking north, indicating three hundred feet below.*"

The CPA occurred at 0901:04, with 0.3nm lateral and 300ft vertical separation indicated on the radar replay. There are no RAF ATM related issues that require further investigation in relation to this Airprox.

ATSI reports that the Tutor was operating on a local training flight from of RAF Barkston Heath and had just obtained a BS from Doncaster Radar.

ATSI had access to recordings of RTF from Doncaster and area radar recordings together with written reports from both pilots.

The radar recordings show the Mode C indications of both ac as FLs.

The Barkston Heath METARs are provided for 0850 and 0950 UTC:

> METAR EGYE 180850Z 26018KT 9999 FEW025 ///// Q1005 BLU=
> METAR EGYE 180950Z 26028KT 9999 FEW030 ///// Q1005 BLU=

The Tutor pilot contacted Doncaster Radar at 0900:00 requesting a BS, they agreed a BS and issued a squawk of 6160.

At 0900:01, radar recordings show the Tutor (Mode S equipped) 9.3nm to the WNW of Barkston Heath, tracking NW. At that point the PA31 (also Mode S equipped) was 3.7nm to the NNE of the Tutor on a converging course. At 0900:47, the lateral distance between the ac had reduced to 1.3nm. The Mode C of the Tutor (squawking 6160) was indicating FL025 with the Mode C of the PA31 indicating FL026. At 0901:05, the Tutor passed in front of the PA31 with 0.3nm lateral distance between the two ac.

CAP774, UK Flight Information Services, Chapter 1, Page 1, Paragraph 1, states:

> 'A Basic Service is an ATS provided for the purpose of giving advice and information useful for the safe and efficient conduct of flights. This may include weather information, changes of serviceability of facilities, conditions at aerodromes, general airspace activity information, and any other information likely to affect safety. The avoidance of other traffic is solely the pilot's responsibility.'

The Doncaster radar controller had agreed a BS with the Tutor pilot but had not identified it so would have been unable to provide surveillance derived TI.

UKAB Note (1): An analysis of the Claxby radar recording confirmed the information in the BM SM and ATSI reports.

HQ AIR (TRG) comments that the benefit of TAS in this case is clear in that it alerted the pilot to a previously unsighted conflict. The PA31 'was not seen until well after the Traffic Alert' but the eventual avoiding action was effective and possibly facilitated the even later sighting by the PA31 pilot. The intent of pilots should be to beat the TAS to the contact in all cases and they must be particularly diligent in moving their heads to mitigate the well publicised effect of the canopy arch.

PART B: SUMMARY OF THE BOARD'S DISCUSSIONS

Information available included reports from the pilots of both ac, transcripts of the relevant RT frequencies, radar recordings, reports from the air traffic controllers involved and reports from the appropriate ATC and operating authorities.

The Board noted that both ac had been operating legitimately under VFR in Class G airspace avoiding other ac by means of the 'see and avoid' principle albeit both were, or had recently been, in receipt of a BS from their respective ATC units. The PA31 had recently left the Waddington frequency and had not yet transferred to East Midlands, but, although not required to do so, the Waddington controller had provided the pilot with accurate TI on the Tutor 4nm away before he left the frequency. The PA31 pilot did not mention in his report at what distance he saw the Tutor or if his sighting had been as a result of this information but Members assumed that it had and he had seen the Tutor shortly after the TI and in good time. Although the pilot estimated the vertical separation to be 500ft and sufficient, the radar recording shows that in the 30 sec leading up to the CPA it was substantially less than he estimated and additional avoidance was required as the Tutor disappeared below the PA31's nose and port engine cowling.

The Tutor pilot was warned of the presence of the (squawking) PA31 by the ac TAS and did not see the ac until it was estimated to be 1nm away; he then initiated avoidance by descending as he was concerned by the PA31's proximity. This descent was evident on the radar recording on the return after the CPA indicating that it had been effective in increasing the separation.

Since both pilots had seen the opposing ac in reasonable time, Members agreed that this incident had been a conflict in Class G airspace and that the Tutor instructor had ensured that there was no risk of collision by taking control and descending.

PART C: ASSESSMENT OF CAUSE AND RISK

Cause: A conflict in Class G airspace.

Degree of Risk: C.